



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/621,695	07/21/2000	Yulin Deng	7648.0006	4876

22852 7590 06/28/2002

FINNEGAN, HENDERSON, FARABOW, GARRETT &
DUNNER LLP
1300 I STREET, NW
WASHINGTON, DC 20005

EXAMINER

WILSON, DONALD R

ART UNIT PAPER NUMBER

1713

DATE MAILED: 06/28/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

MF-7

Office Action Summary

Application No.

09/621,695

Applicant(s)

DENG ET AL.

Examiner

D. R. Wilson

Art Unit

1713

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 May 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-66 is/are pending in the application.
- 4a) Of the above claim(s) 3,4,13-15,19-21 and 26-65 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,5-12,16-18,22-25 and 66 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claim(s) 1,2,5-12,16-18,22-25 and 66 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2. 6) ☐ Other: _____

DETAILED ACTION

Response to Restriction Requirement

1. Applicant's election with traverse of the inventions of Group I, Claims 1-25 and 66 in Paper No. 4 is acknowledged. The traversal is on the ground(s) that it would not be a serious burden for the Examiner to search the subject matter of all of the claims. This is not found persuasive because the subject matter of all of the claims does not require the same search as alleged by applicant. The different groups of claims involve differing concepts and require different searches (even if related) as was set forth in the restriction requirement. Further, the entire examination process is to be considered, not just the initial search.
2. The requirement is still deemed proper and is therefore made FINAL. Claims 26-65 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention.

Response to the Election of Species Requirement

3. Applicant's election with traverse of the species of:
 - a. butyl acrylate as the cationic polymer,
 - b. a tacky polymer,
 - c. no tackifier present, and
 - d. no plasticizer present,

in the Paper No. 6 is acknowledged. The traversal is said to be on the same ground(s) as in the restriction requirement. This is not deemed to be persuasive because applicant has not submitted evidence, or identified such evidence now of record showing the species to be obvious variants, or clearly admitted on the record that this is the case. If applicant submits or identifies such evidence or makes a clear admission on the record then the election of specie requirement will be withdrawn. However, as previously pointed out, in either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. § 103 of the other invention.

Art Unit: 1713

4. Applicant's response to the election of species requirement for the cationic polymer was non-responsive to the requirements to elect a single ultimate disclosed specie. During a telephone conversation with Ms. Lori-Ann Johnson on 6/20/02 a further provisional election was made with traverse to prosecute the invention of the specie wherein the cationic polymer is as made in Example 1, i.e., a copolymer of butyl acrylate and 3-methacrylamidopropyltrimethylammonium chloride (MAPTAC).

Affirmation of this election must be made by applicant in replying to this Office action.

5. Claims 3-4, 13-15 and 19-21 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Objection to Claims

6. Claim 66 is objected to because it depends from a claim withdrawn from consideration due to a restriction requirement and needs to be written in independent form. Appropriate correction is required.

7. Claim 17 is objected to because of the following informalities: "Alkyl(meth)acrylate" should be two words, i.e., "alkyl (meth)acrylate", and "2-ethyl hexyl" needs to be one word, i.e., "2-ethylhexyl".

Appropriate correction is required.

Claim Rejections - 35 USC § 112, First Paragraph

8. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

9. ***Claims 1-2, 5-12, 16-18, 22-25 and 66 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for adhesives or coatings comprising a copolymer of a cationic monomer and a non-cationic monomer, does not reasonably provide enablement for polymers formed from a backbone polymer and a cationic monomer.*** The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention commensurate in scope with these claims. The specification in the paragraph bridging pages 8-9 teaches that the polymer is comprised of a cationically charged monomer and a polymer backbone copolymerizable with said monomer. Claim 66 also specifically claims a polymer

Art Unit: 1713

made by the polymerization of copolymerizable backbone and a cationically charged monomer. Such polymers would presumably be graft copolymers. Yet the specification provides no teaching of how to make such graft polymers. The only polymers specifically disclosed are those made by the copolymerization of the cationically charged monomer and another comonomer(s) copolymerizable therewith, wherein both monomers result in forming the polymer backbone. Nowhere does the specification teach how to make polymers such as are being claimed. If applicant maintains that the claims are correctly drawn to graft copolymers and that the specification teaches how to make such graft polymers, then Claims 5-12, 16-18 and 66 should be considered withdrawn from consideration as not being to an elected specie of the invention. In order to advance prosecution the prior art rejections assume that applicant intended to claim compositions comprising a polymer which is a copolymer of a cationic monomer and a comonomer copolymerizable therewith, consistent with the elected specie of copolymer.

Claim Rejections - 35 USC § 112, Second Paragraph

10. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

11. ***Claims 10-12, 16-18 and 66 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.***

12. The language of Claim 10 is indefinite because "vinyl acetate, butadiene, styrene and acrylate are not polymer backbones but are monomer units. Additionally, "the alkyl group" lacks antecedent basis and is indefinite because an alkyl group can be in different positions of an acrylate molecule. The claim is further indefinite because the materials set forth in the Markush group do not belong to an art-recognized class with any property in common, i.e., monomers are not polymers. Further, it is not seen that there is any teaching of combinations of backbone polymers or backbone polymers with the monomers included in the group.

Art Unit: 1713

13. Claim 11 is indefinite because an alkyl ammonium chloride (sic) is not a polymerizable monomer, and without more, is not seen to contain a polymerizable group.

14. Claim 12 is indefinite because it is not known what is meant by a "methacryloylammino" group containing compound. Presumably, applicant meant "methacryloylamino" or "methacrylamido". Further, it is not seen the brackets are needed in any of the compound names and only add confusion, e.g., 3-(methacryloylamino)propyltrimethylammonium chloride is an unambiguous name. "Vinyl benzyl trimethyl ammonium chloride (sic) is indefinite because it is unclear where the benzyl and vinyl groups belong. A proper name for a single compound would for instance be (4-vinylbenzyl)trimethylammonium chloride.

15. Claim 18 is indefinite because if it further comprises a monomer or macromer the amount could not be 0 mole %. If amended to recite a positive amount Claims 18 will also be withdrawn from consideration as being to a non-elected specie of the invention.

16. Claim 66 is indefinite as the specification provides no teaching of copolymerizable backbones with cationically charged monomers.

Objection to Disclosure - Informalities

17. **The disclosure is objected to because of the following informalities: Page 13 has missing information at lines 5-7.** The page needs to be corrected without adding new matter to the specification. Appropriate correction is required.

Claim Rejections - 35 USC § 102(b)/§ 103(a)

18. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

19. The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this

Art Unit: 1713

application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

20. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

21. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

22. Claims 1-2, 5-12, 16-18, 22-25 and 66 are rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Mandeville.

23. Mandeville discloses polymers and copolymer of monomers having a pendant ammonium group (abstract). In one embodiment the polymer comprises a monomeric repeat unit of Formula I, a specific example of which is N-(3-trimethylammoniopropyl)methacrylamide (col. 6, line 28), which is another name for the cationic monomer in the elected specie MATPAC of the instant invention. The Examples exemplify the use of the chloride salt MATPAC. Copolymers of the monomers of Formula I with a hydrophobic monomer of which a suitable example is n-butyl acrylate are also disclosed (col. 7, lines 41-58). Thus, copolymers of the elected species of monomer would have been readily envisaged. It is further disclosed that the amount of the comonomer of Formula I in the copolymer is 5 to 95 mole%, preferably 20 to 80 mole % (col. 8, lines 25-42). As cationic comonomer amounts of 5 and 20 mole % are specifically disclosed such amounts would also have been readily envisaged. As to the preamble of the polymer being a recyclable adhesive or coating, this isn't seen to add patentability to the polymer which is being claimed. As the compositions being claimed are the same as those disclosed in Mandeville, it is reasonable to expect that they inherently have the same properties.

It has been held that where applicant claims a composition in terms of function, property or characteristic where said function is not explicitly shown by the reference and where the examiner

Art Unit: 1713

has explained why the function, property or characteristic is considered inherent in the prior art, it is appropriate for the examiner to make a rejection under both the applicable section of 35 USC 102 and 35 USC 103 such that the burden is placed upon the applicant to provide clear evidence that the respective compositions do in fact differ. *In re Best*, 195 USPQ 430, 433 (CCPA 1977); *In re Fitzgerald et al.*, 205 USPQ 594, 596 (CCPA 1980).

As to the limitations of Claims 22 to 25 of the adhesive forming tapes, labels, paper coatings or self-adhesive stamps, these are intended uses which also are not seen to add patentability of what is being claimed. If Claims 22-25 are amended to recite a claim to a tape, label, paper coating, or stamp they will be withdrawn from consideration as belonging to non-elected groups of inventions.

24. Claims 1-2, 5-12, 16-18, 22-25 and 66 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Bister.

25. Bister discloses compositions useful for priming substrates comprising 80-99 wt.% of an ethylenic unsaturated monomer, preferably selected from a group including acrylate esters, and 1-20 wt.% of a water soluble cationic monomer (col. 3, line 58 to col. 4, line 16). Thus, compositions with 20 wt.% cationic monomer would have been envisaged, and on a mole% basis would be within the limits of the instant claims. Monomers of Formula I are preferred cationic monomers of which a specific example is MATPAC (col. 5, line 52 to col. 6, line 39). Butyl acrylate is one of the listed comonomers and is used in the examples. The minimum film forming temperatures of the polymers is preferably between 0 and 80°C (col. 5, lines 27-43). Such polymers would include those with tacky properties as well as hot melt adhesive properties. As above, the preamble and intended uses of the composition are seen to add patentability to the instantly claimed invention.

26. Claims 1-2, 5-12, 16-18, 22-25 and 66 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Huth.

27. Huth discloses compositions useful as a sizing for paper pulp 60-95 wt.% of an ethylenic unsaturated monomer, preferably selected from a group including acrylate esters, and 2-20 wt.% of a salt forming water soluble monomer of which a specific example is (meth)acryloamidopropyl-trimethylammonium chloride (col. 5, lines 13-55). Thus, compositions with 20 wt.% MATPAC would be envisaged, and on a mole% basis would be within the limits of the instant claims. Butyl acrylate is one of the listed comonomers and is used in the examples. The minimum film forming temperatures are below

Art Unit: 1713

50°C and the glass temperatures of the copolymers are between 0 and 70°C (col. 2, line 61 to col. 3, line 22). Such polymers would include those with tacky properties as well as hot melt adhesive properties. As above, the preamble and intended uses of the composition are seen to add patentability to the instantly claimed invention.

Art of Interest/Technological Background

28. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Fitzpatrick is a C-I-P of Mandeville and the teachings are considered to be cumulative. Warren and Iwasaki disclose or make obvious MATPAC butyl acrylate copolymers and could also be used in rejecting the instant claims. Iyer, Trouve disclose MATPAC copolymers which could be used in a future rejection of non-elected species of the invention.

Future Correspondence

Any inquiry concerning this communication or earlier communications from the examiner should be directed to D. R. Wilson whose telephone number is 703-308-2398.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu can be reached on 703-308-2450. The fax phone numbers for the organization where this application or proceeding is assigned are 703-305-5408 for regular communications and 703-305-3599 for After Final communications. The unofficial direct fax phone number to the Examiner's desk is 703-872-9029.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 308-2351.



D. R. Wilson
Primary Examiner
Art Unit 1713